Problem statement: Develop an end to end login application

Features OR Functional Requirements:

1. Create a new account
2. Forgot password
3. Retrieve all user ids
4. Validate the user id

Pre requisite software’s

1. Eclipse
2. JDK
3. Tomcat
4. Any database

Dependencies:

1. servlet-api.jar
2. ojdbc5.jar

Table definition:

Name Null? Type

----------------------------------------- -------- ----------------------------

USERID NUMBER(5)

UNAME VARCHAR2(10)

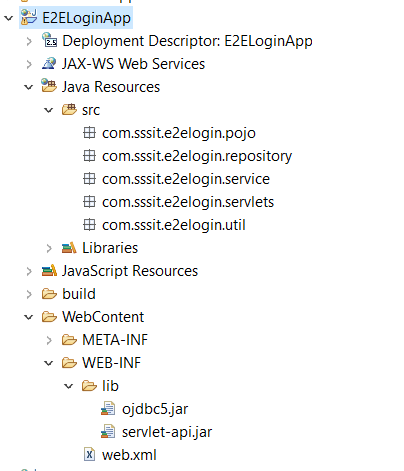
PASSWD VARCHAR2(10)

DB information

User Name : advdec23

Password : advdec23

Folder Structure



Step 1: develop a login html page

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<form action=*"/E2ELoginApp/validate"* method=*"post"*>

<center>

<table>

<tr>

<td> Enter User Name: </td>

<td> <input type=*"text"* name=*"username"*/> </td>

</tr>

<tr>

<td> Enter Password: </td>

<td> <input type=*"password"* name=*"pwd"*/> </td>

</tr>

<tr>

<td colspan=*"2"*> <input type=*"submit"* value=*"Login"*/> </td>

</tr>

</table>

</center>

</form>

<a href=*"register.html"*> Click here to register</a>

<a href=*"forgotpasswd.html"*> Forgot Password</a>

</body>

</html>

Step 2: develop a login pojo class

**package** com.sssit.e2elogin.pojo;

**public** **class** LoginPojo {

**private** **int** userId;

**private** String uName;

**private** String passwd;

**public** **int** getUserId() {

**return** userId;

}

**public** **void** setUserId(**int** userId) {

**this**.userId = userId;

}

**public** String getuName() {

**return** uName;

}

**public** **void** setuName(String uName) {

**this**.uName = uName;

}

**public** String getPasswd() {

**return** passwd;

}

**public** **void** setPasswd(String passwd) {

**this**.passwd = passwd;

}

@Override

**public** String toString() {

**return** "LoginPojo [userId=" + userId + ", uName=" + uName + ", passwd=" + passwd + "]";

}

}

Step 3: develop a util method to get the Connection Object

package com.sssit.e2elogin.util;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.SQLException;

public class JDBCConnection {

private static Connection con = null;

public static final String URL = "jdbc:oracle:thin:@localhost:1521:orcl";

public static final String UNAME = "advdec23";

public static final String PASS = "advdec23";

public static Connection getConnection() {

if(con==null) {

try {

Class.forName("oracle.jdbc.driver.OracleDriver");

con = DriverManager.getConnection(URL, UNAME, PASS);

} catch (ClassNotFoundException e) {

System.out.println("Failed to Load Driver class...");

} catch (SQLException e) {

System.out.println("Failed to Establish connection...");

}

}

return con;

}

}

Step 4: Develop a JDBC program to get the existed credentials from DB

**package** com.sssit.e2elogin.repository;

**import** java.sql.Connection;

**import** java.sql.PreparedStatement;

**import** java.sql.ResultSet;

**import** com.sssit.e2elogin.pojo.LoginPojo;

**import** com.sssit.e2elogin.util.JDBCConnection;

**public** **class** LoginRepository {

**public** LoginPojo getCredetialsByUserName(String userName) {

Connection con = **null**;

PreparedStatement pstmt = **null**;

ResultSet rs = **null**;

**try**

{

con = JDBCConnection.*getConnection*();

String SQL\_QUERY = "select \* from login where uname like ?";

pstmt=con.prepareStatement(SQL\_QUERY);

pstmt.setString(1,userName);

rs = pstmt.executeQuery();

rs.next();

LoginPojo login = **new** LoginPojo();

login.setUserId(rs.getInt("userid"));

login.setuName(rs.getString("uname"));

login.setPasswd(rs.getString("passwd"));

System.***out***.println("recieved Data..." + login);

**return** login;

}

**catch** (Exception e) {

System.***out***.println("Exception Caught.....");

}

**return** **null**;

}

}

Step : Develop a Servlet to read the entered credentials from HTML Page and send to respective service method for validation

**package** com.sssit.e2elogin.servlets;

**import** java.io.IOException;

**import** java.io.PrintWriter;

**import** javax.servlet.RequestDispatcher;

**import** javax.servlet.ServletException;

**import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

**import** com.sssit.e2elogin.pojo.LoginPojo;

**import** com.sssit.e2elogin.repository.LoginRepository;

/\*\*

\* Servlet implementation class CredentialsValidateServlet

\*/

**public** **class** CredentialsValidateServlet **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

/\*\*

\* **@see** HttpServlet#HttpServlet()

\*/

**public** CredentialsValidateServlet() {

**super**();

// **TODO** Auto-generated constructor stub

}

/\*\*

\* **@see** HttpServlet#service(HttpServletRequest request, HttpServletResponse response)

\*/

**protected** **void** service(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

PrintWriter pw = response.getWriter();

response.setContentType("text/html");

String userName = request.getParameter("username");

String passwd = request.getParameter("pwd");

LoginRepository repository = **new** LoginRepository();

LoginPojo pojo = repository.getCredetialsByUserName(userName);

**if**(pojo!=**null** && passwd.equals(pojo.getPasswd())) {

pw.println("Welcome to MyApplication");

}

**else**

{

pw.println("<h1>Invalid Credentials</h1>");

RequestDispatcher rd = request.getRequestDispatcher("login.html");

rd.include(request,response);

}

}

}

Feature : Add a new User

Develop a HTML Page

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<form action=*"/E2ELoginApp/register"* method=*"post"*>

<center>

<table>

<tr>

<td> Enter User Name: </td>

<td> <input type=*"text"* name=*"username"*/> </td>

</tr>

<tr>

<td> Enter Password: </td>

<td> <input type=*"password"* name=*"pwd"*/> </td>

</tr>

<tr>

<td colspan=*"2"*> <input type=*"submit"* value=*"Register"*/> </td>

</tr>

</table>

</center>

</form>

</body>

</html>

Step : Develop a Servlet – read the data from HTML and send the data to repository.

**package** com.sssit.e2elogin.servlets;

**import** java.io.IOException;

**import** java.io.PrintWriter;

**import** javax.servlet.RequestDispatcher;

**import** javax.servlet.ServletException;

**import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

**import** com.sssit.e2elogin.pojo.LoginPojo;

**import** com.sssit.e2elogin.repository.LoginRepository;

/\*\*

\* Servlet implementation class NewUserRegisterServlet

\*/

**public** **class** NewUserRegisterServlet **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

/\*\*

\* **@see** HttpServlet#HttpServlet()

\*/

**public** NewUserRegisterServlet() {

**super**();

// **TODO** Auto-generated constructor stub

}

/\*\*

\* **@see** HttpServlet#service(HttpServletRequest request, HttpServletResponse response)

\*/

**protected** **void** service(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

PrintWriter pw = response.getWriter();

response.setContentType("text/html");

String userName = request.getParameter("username");

String passwd = request.getParameter("pwd");

LoginRepository repository = **new** LoginRepository();

LoginPojo pojo = **new** LoginPojo();

pojo.setuName(userName);

pojo.setPasswd(passwd);

**boolean** status = repository.addNewUser(pojo);

**if**(status)

pw.println("<h1> user created successfully....</h1>");

**else**

pw.println("<h1> user creation failed ....</h1>");

RequestDispatcher rd = request.getRequestDispatcher("login.html");

rd.include(request,response);

}

}

Step : develop a method in the repository to insert a new user information to login table

package com.sssit.e2elogin.repository;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import com.sssit.e2elogin.pojo.LoginPojo;

import com.sssit.e2elogin.util.JDBCConnection;

public class LoginRepository {

public LoginPojo getCredetialsByUserName(String userName) {

Connection con = null;

PreparedStatement pstmt = null;

ResultSet rs = null;

try

{

con = JDBCConnection.getConnection();

String SQL\_QUERY = "select \* from login where uname like ?";

pstmt=con.prepareStatement(SQL\_QUERY);

pstmt.setString(1,userName);

rs = pstmt.executeQuery();

rs.next();

LoginPojo login = new LoginPojo();

login.setUserId(rs.getInt("userid"));

login.setuName(rs.getString("uname"));

login.setPasswd(rs.getString("passwd"));

System.out.println("recieved Data..." + login);

return login;

}

catch (Exception e) {

System.out.println("Exception Caught.....");

}

return null;

}

public boolean addNewUser(LoginPojo pojo) {

Connection con = null;

PreparedStatement pstmt = null;

ResultSet rs = null;

try

{

con = JDBCConnection.getConnection();

String SQL\_QUERY = "insert into login(uname,passwd) values(?,?)";

pstmt=con.prepareStatement(SQL\_QUERY);

pstmt.setString(1,pojo.getuName());

pstmt.setString(2, pojo.getPasswd());

int status = pstmt.executeUpdate();

if(status>0)

return true;

}

catch (Exception e) {

System.out.println("Exception Caught.....");

}

return false;

}

}